

[0052] Having thus described the invention, what is claimed as new and secured by Letters Patent is:

1. A sensor array forming part of an intrusion detection system comprising:
 - (i) at least one sensor node, each sensor node having a longitudinal axis and providing a detection zone defined by a plane extending transversely to the longitudinal axis, and having at least one discrete sensor for generating a response to an intruder entering the detection zone of the sensor node; and
 - (ii) an array processor for generating information based on processing of each response, the array processor being coupled to each of the sensor nodes.
2. The sensor array according to claim 1, wherein the sensor array has at least two sensor nodes.
3. The sensor array according to claim 1, wherein the sensor array has a plurality of sensor nodes.
4. The sensor array according to claim 2, wherein each discrete sensor is selected from at least one member of the group consisting of microwave modules, ultrasonic transducers, passive IR sensors, and active reflective IR sensors.
5. The sensor array according to claim 2, wherein the sensor array includes a distribution point for connecting a means for providing power, the distribution point being coupled to the array processor and each sensor node.
6. The sensor array according to claim 2, wherein each sensor node is encased within and spaced along a deformable cable.
7. The sensor array according to claim 2, wherein the sensor array is encased within an elongated housing.

8. The sensor array according to claim 2, wherein each sensor node is formed as an integrated circuit.
9. The sensor array according to claim 2, wherein at least two of the detection zones overlap.
10. The sensor array according to claim 2, wherein at least two of the detection zones abut.
11. The sensor array according to claim 2, wherein adjacent sensor nodes of the at least two sensor nodes are spaced apart along the sensor array, and wherein the space between adjacent sensor nodes has a predetermined range based upon intruder type and intruder orientation in relation to the detection zones.
12. The sensor array according to claim 2, wherein adjacent sensor nodes of the at least two sensor nodes are spaced apart along the sensor array, and wherein the space between adjacent sensor nodes has a predetermined range based upon a span of each detection zone.
13. The sensor array according to claim 2, wherein adjacent sensor nodes of the at least two sensor nodes are spaced apart along the sensor array, and wherein the space between adjacent sensor nodes has a predetermined range based upon a distance to be detected.
14. The sensor array according to claim 2, wherein adjacent sensor nodes of the at least two sensor nodes are spaced apart along the sensor array, and wherein the space between adjacent sensor nodes has a range of 0.5-20.0 meters.

15. A sensor array forming part of an intrusion detection system comprising:
- (i) at least one sensor node, each sensor node having a longitudinal axis and providing a detection zone defined by a plane extending transversely to the longitudinal axis of the sensor array, and having:
 - (a) at least one discrete sensor for generating a response to an intruder entering the detection zone of the sensor node; and
 - (b) a node processor for generating an alarm disturbance signature based on the response generated by the sensor node, the node processor being coupled to each sensor; and
 - (ii) an array processor for generating information based on the alarm disturbance signature received from each node processor, the array processor being coupled to the node processor of each sensor node.
16. The sensor array according to claim 15, wherein the sensor array has at least two sensor nodes.
17. The sensor array according to claim 16, wherein each discrete sensor is selected from at least one member of the group consisting of microwave modules, ultrasonic transducers, passive IR sensors, and active reflective IR sensors.
18. An intrusion detection system comprising:
- (I) at least one sensor array having:
 - (i) at least one sensor node, each sensor node having a longitudinal axis and providing a detection zone defined by a plane extending transversely to the longitudinal axis, and having:
 - (a) at least one discrete sensor for generating a response to an intruder entering the detection zone of the sensor node; and
 - (b) a node processor for generating alarm disturbance signature based on the response received from each discrete sensor, the node processor being coupled to each discrete sensor; and

(ii) an array processor for generating information based on the alarm disturbance signature received from each node processor, the array processor being coupled to the node processor of each sensor node;

(II) a calibration means for adjusting the sensitivity setting of each discrete sensor; and

(III) a system processor for processing the information received from the array processor and for generating an alarm condition;

wherein the calibrating system is coupled to the system controller, and wherein the system controller is coupled to each sensor array.

19. An intrusion detection system according to claim 18, wherein the sensor array has at least two sensor nodes.

20. An intrusion detection system according to claim 19, wherein each sensor is selected from at least one member of the group consisting of microwave modules, ultrasonic transducers, passive IR sensors, and active reflective IR sensors.